We claim:

1. A phosphor screen that comprises an inorganic phosphor capable of absorbing X-rays and emitting electromagnetic radiation having a wavelength greater than 300 nm, said inorganic phosphor being coated in admixture with a polymeric binder in a phosphor layer onto a flexible support,

said flexible support comprising a reflective substrate comprising a continuous polyester first phase and a second phase dispersed within said continuous polyester first phase, said second phase comprised of microvoids containing barium sulfate particles.

2. The screen of claim 1 wherein said polyester first phase comprises biaxially oriented polyester.

3. The screen of claim 1 wherein the ratio of the refractive index of said continuous polyester first phase to said second phase is from about 1.4:1 to about 1.6:1.

4. The screen of claim 1 wherein said support is capable of reflecting at least 90% of incident radiation having a wavelength of from about 300 to about 700 nm.

5. The screen of claim 1 wherein said microvoids occupy from about 35 to about 60% (by volume) of said reflective substrate.

6. The screen of claim 1 wherein said flexible support has a dry thickness of from about 75 to about 400 μm.

7. The screen of claim 1 wherein said polyester first phase is composed of poly(1,4-cyclohexylene dimethylene terephthalate).

8. The screen of claim 1 wherein the particles of barium sulfate have an average particle size of from about 0.3 to about 2 μm and comprise from about 35 to about 65 weight % of total dry reflective substrate weight.

9. The screen of claim 1 wherein said phosphor is sensitive to electromagnetic radiation having a wavelength of from about 350 to about 450 nm.

10. The screen of claim 1 further comprising a transparent protective layer disposed over said phosphor layer.

11. The screen of claim 1 wherein said support further comprises a second microvoided polyester layer that is free of barium sulfate and arranged adjacent said reflective substrate opposite said phosphor layer.

12. The screen of claim 11 wherein said second microvoided polyester layer comprises microvoids in amount of from about 35 to about 60% (by volume).

13. The screen of claim 11 wherein said second microvoided polyester layer has a dry thickness of from about 30 to about 200 μm.

14. The screen of claim 11 wherein said second microvoided polyester layer is arranged directly adjacent said reflective substrate.

15. A radiographic imaging assembly comprising:

A) a photosensitive silver halide-containing film comprising a support having first and second major surfaces,

said photosensitive silver halide-containing film having disposed on at least said first major support surface, one or more photosensitive emulsion layers, and

B) a phosphor screen that comprises an inorganic phosphor capable of absorbing X-rays and emitting electromagnetic radiation having a wavelength greater than 300 nm, said inorganic phosphor being coated in admixture with a polymeric binder in a phosphor layer onto a flexible support,

said flexible support comprising a reflective substrate comprising a continuous polyester first phase and a second phase dispersed within said continuous polyester first phase, said second phase comprised of microvoids containing barium sulfate particles.

16. The imaging assembly of claim 15 wherein said photosensitive silver halide-containing film is a dual-coated radiographic photographic film.

17. The imaging assembly of claim 15 wherein said photosensitive silver halide-containing film is a photosensitive thermally-developable film.

18. The imaging assembly of claim 17 wherein said photosensitive silver halide-containing film comprises a support having a photosensitive thermally-developable imaging layer on both sides of said support.

19. A method of providing a radiographic image comprising:

A) directing imaging X-radiation through a phosphor screen that comprises an inorganic phosphor capable of absorbing X-rays and emitting electromagnetic radiation having a wavelength greater than 300 nm, said inorganic phosphor being coated in admixture with a polymeric binder in a phosphor layer onto a flexible support,

said flexible support comprising a reflective substrate comprising a continuous polyester first phase and a second phase dispersed within said continuous polyester first phase, said second phase comprised of microvoids containing barium sulfate particles, thereby causing said electromagnetic radiation

to impinge on a photosensitive silver halide-containing film comprising a support having first and second major surfaces,

said photosensitive silver halide-containing film having disposed on at least said first major support surface, one or more photosensitive emulsion layers, to form a latent image in said film, and

B) developing said latent image in said film.

20. The method of claim 19 wherein said photosensitive silver halide-containing film is a "wet" processable radiographic film and said latent image is developed using wet processing solutions.

21. The method of claim 19 wherein said photosensitive silver halide-containing film is a "dry" thermally-developable radiographic film and said latent image is developed using thermal energy.